E&MJ METAL AND MINERAL MARKETS

WEEKLY MARKET INFORMATION ISSUED BY THE PUBLISHERS OF ENGINEERING AND MINING JOURNAL

Vol. 23 | NEW YORK, February 14, 1952 | No. 7

THIS WEEK IN THE MARKETS . . .

The long struggle over the import duties on lead and zinc ended Feb. 11 when President Truman signed the bills that suspended the rates until March 31, 1953, or until the end of the present emergency, whichever comes first. The legislation also instructs the President to reimpose these duties if the price of lead and zinc (see page 7) should fall below 18c. The suspension became effective on Feb. 12.

GENERAL

Steel wage talks are casting a shadow over all markets. Workers, in the end, will get higher wages and steel prices will rise. Then all costs will move up.

Steel operations this week are scheduled at 100.1% of capacity.

Canadian consumers of lead and zinc have asked that controls on home use of these metals be abolished.

COPPER – 24½c. Valley (export 27½c.)

The supply of copper available for March is expected to show moderate improvement over February. However, allocations will fall below the monthly averages established last year. After March the industry looks for more substantial improvement.

Inability of the Chilean authorities to move all of its 20% take on the basis of $1,200 per metric ton is causing some embarrassment. The price is viewed by copper experts as altogether fantastic. In the so-called black markets of Europe, prices realized of late vary between 40c. and 45c. per lb.

Sales of copper in the domestic market of February shipment metal now total 66,000 tons.

LEAD – 19c. N. Y. (f.a.s. Gulf 19-19¼c.)

Buyers who have been holding off pending developments on the import duty increased their purchases of foreign metal. The "famine" conditions in lead are expected to vanish. The duty on lead before the suspension became official was 1 1/10c. per lb. on pig lead and ¾c. per lb. on lead contained in ores and concentrates.

Foreign metal was available on the basis of 19c. per lb., N. Y., the ceiling price prevailing on domestic metal. Imports are expected to average more than 17,000 tons a month during the first half of the year.

With allocations out of the way for this month, sales for the week declined to 2,761 tons.

ZINC – 19½c. E. St. Louis (foreign 22-22½c.)

Suspension of the import duty on zinc – 3/5c. lb. for zinc contained in ore and 7/10c. lb. for slab zinc – should aid materially in maintaining a steady flow of foreign zinc into this market. Prices abroad are gradually moving down to the U. S. basis.

Production of slab zinc in January by U. S. smelters increased to 83,205 tons, or well above the monthly average of 77,653 tons for 1951. Total shipments came to 78,403 tons, of which domestic consumers got 75,039 tons, exports took 1,782 tons, and the Government obtained 1,582 tons. Stocks increased to 26,703 tons, chiefly because of slow action in granting export licenses.

Mexican common zinc 22 to 22½c., Gulf ports.

TIN – $1.21½, N. Y.

Indonesian officials revealed last week that the $1.18 per lb. settling basis named in the U. S.-British contract would not be acceptable. In negotiations now in progress they are expected to hold out for at least $1.25.

Sales by RFC to domestic consumers of February shipment tin now total 3 280 long tons.

London prices were unsettled on reduced speculative interest.

TUNGSTEN – $65

Importers believe U. S. authorities are leaning toward a $60 basis on foreign ore. The domestic quotation continues at the $65 ceiling.

U. S. mine output has increased to 1,558 short tons of 60% WO_3 in third quarter of 1951, against 1,500 tons in second quarter and an average of 1,061 tons a quarter during all of 1950.

QUICKSILVER – $201-$204

The position of the market continues to favor buyers. Business was noted at $201. On small parcels there were sellers at $203 and $204 per flask.

SILVER – 88c., N. Y. (London 77d.)

Moderate business was reported here in foreign silver. The price was steady.

IN THIS ISSUE...

Daily and Average Prices p.9
Nicaro Nickel in Production p.3
Sees Record Zinc Output p.3
Washington Reports p.7
Lead Consumption by Industries p.11

A Statement by Anaconda on the Copper Situation

MANY users of copper have vital decisions to make . . . usually in connection with the present defense-induced shortages of copper and aluminum. This statement is an effort to remove the smoke screen surrounding the copper picture . . . to wipe away the confusion caused by too much talk supported by too few facts.

Substitution poses problems – Industry has been urged to substitute aluminum and other materials for copper. In some instances this may be logical and practicable. In many others it is difficult, if not impossible. But – before making *any* long-term decisions that may cost a great deal of money in engineering, new plant facilities or rescheduling of production operations – one should know the facts about the future of copper.

New Anaconda projects – The first major increase in copper production will come from Anaconda when the Greater Butte Project and the new Sulphide Plant at Chuquicamata, Chile, begin operations this spring. By 1953, these two projects should raise present levels of copper production by about 95,000 tons yearly.

Toward the close of 1953, Anaconda's new Yerington project in Nevada is expected to start producing at an annual rate of 30,000 tons. By then, Anaconda will be adding to the present yearly copper supply at the rate of about 125,000 tons.

Other new projects – During 1954-55 still other new projects in the U. S. and friendly foreign countries will further augment the increasing copper supply. All told, it is estimated that by 1955, not less than 450,000 tons of copper could be produced annually – over and above present production levels.

Accordingly, in 1955-56, domestic production plus imports could bring the U. S. copper supply to 1,800,000 tons yearly. This would represent an increase of about 20% over present levels. Based on historical comparisons, and barring a large-scale shooting war, this amount of copper could support a Federal Reserve Board Index of Industrial Production of 270, an increase of 24% over the present, and 45% above the first half of 1950.

• • •

These are the 'things to come' in copper. On the basis of the facts there is no necessity for considering long-range substitution of other materials for the red metal.

52320A

ANACONDA
COPPER MINING COMPANY

The American Brass Company
Anaconda Wire & Cable Company
International Smelting and Refining Company
Andes Copper Mining Company
Chile Copper Company
Greene Cananea Copper Company

PRODUCERS OF: Copper, Zinc, Lead, Silver, Gold, Cadmium, Vanadium, Superphosphate, Manganese Ore, Ferromanganese.

MANUFACTURERS OF: Electrical Wires and Cables, Copper, Brass, Bronze and other Copper Alloys in such forms as Sheet, Plate, Tube, Pipe, Rod, Wire, Forgings, Stampings, Extrusions, Flexible Metal Hose and Tubing.

E&MJ METAL AND MINERAL MARKETS

WEEKLY MARKET INFORMATION ISSUED BY THE PUBLISHERS OF ENGINEERING AND MINING JOURNAL

ALFRED M. STAEHLE.....*Publisher* H. H. WANDERS.....*Editor*
R. H. RAMSEY.....*Editorial Director* R. W. DAVIS.....*Sales Manager*

E&MJ Metal and Mineral Markets is published each Thursday with a daily quotation for copper, lead, zinc, tin, and silver. Commodities that change price infrequently are quoted at weekly or monthly intervals, according to their importance. Official weekly and calendar weekly averages, also monthly averages, are published for copper, lead, zinc, tin, and silver in the United States market.

E&MJ METAL AND MINERAL MARKETS, Feb. 14, 1952, Vol. 23, No. 7. Published weekly by McGraw-Hill Publishing Company, Inc., James H. McGraw, (1860-1948), Founder. Executive, Editorial, Advertising and Publication office, 330 W. 42nd St., New York 36, N. Y. Curtis W. McGraw, President; Willard Chevalier, Executive Vice President; Joseph A. Gerardi, Vice President and Treasurer, Paul Montgomery, Senior Vice President, Publications Division; Nelson Bond, Vice President and Director of Advertising; J. E. Blackburn, Jr., Vice President and Director of Circulation. Price per copy, 25 cents (United States currency). Subscriptions: Address correspondence to E&MJ Metal and Mineral Markets, Subscription service, 330 W. 42nd St., New York 36, N. Y. Allow 10 days for change of address. In the United States and possessions $6 per year, $9 for 2 years, $12 for 3 years. Canada $10 per year, $16 for 2 years, $20 for 3 years. Pan-American countries and the Philippine Islands $15 per year, $25 for 2 years, $30 for 3 years. Elsewhere $25 per year, $40 for 2 years, $50 for 3 years. Please indicate position and company connection in all subscription orders. Entered as second-class matter February 27, 1930, at the Post Office at New York, N. Y., under the Act of March 3, 1879. Copyright 1952 by McGraw-Hill Publishing Co., Inc. Printed in U.S.A.

Record Zinc Production in Prospect for 1952

Assuming that the world's requirements of zinc concentrates approach a balance, it is possible that U.S. zinc smelters will achieve in 1952 an all-time peak production of 1-million tons of slab zinc, according to Charles R. Ince, vice president of the St. Joseph Lead Co., New York, N.Y.

This opinion was expressed in Mr. Ince's analysis of the zinc industry appearing in the February, 1952, issue of *Engineering and Mining Journal*. In view of recent improvement in imports of slab zinc, and if the zinc allocated to the U.S. by the I.M.C. actually materializes, U.S. consumers of zinc ought to have available well over 1-million tons in 1952, as contrasted with the 920,000 tons available in 1951.

Mr. Ince notes, in regard to the future supply of zinc, that at a meeting of the Institute of Metals in London in October, 1951, world reserves of zinc were estimated at 40 years' supply. In 1931, a similar estimate gave a 22½-year reserve.

Requirements of zinc in 1952, Mr. Ince says, will probably be lower than in the last two years of unsatisfied demands. Consumption of zinc as well as other such industrial commodities, is reflected quite clearly in industrial production. Mr. Ince points out that the Federal Reserve Board's index has declined from 223 in April 1951 to around 218 as the year ended.

In reference to premium prices paid abroad, Mr. Ince observes:

"With the United States and United Kingdom accounting for 60% of the free world's consumption and both countries operating under controlled economies, the premiums paid in the world market were somewhat surprising and may be attributed in part to other than a normal industrial demand. There were indications that zinc, along with other base metals, was being used as a hedge against weakening foreign currencies, as evidenced by the fact that the apparent increase in consumption of several European countries exceeded the improvement in industrial activity in those countries. Furthermore, there were strong probabilities that some of the buying in the European market was for the account of countries behind the Iron Curtain."

He points out that premium prices paid abroad have declined greatly for zinc and have disappeared for lead.

All things considered, Mr. Ince believes there is every prospect that for the foreseeable future zinc supplies will be adequate. This, he says, should be reassuring to zinc consumers.

•

Cuba's Wartime Nickel Plant in Production

Reopening of the Nicaro plant in Oriente Province, Cuba, took place last week, according to Jess Larson, administrator of the General Services Administration. Nicaro was constructed during World War I at a cost of $32-million.

Four of the plant's 12 Herreshoff furnaces are working and each has a capacity in excess of 200,000 lb. of granular nickel oxide a month. The other eight are scheduled to be brought into operation during the next four months. The metallurgical plant then will be producing at the rate of about 30-million lb. a year, equivalent to 10% of the world's annual nickel production in the pre-Korean year of 1949.

Nickel oxide, a granular substance, is the plant's final product. The oxide contains about 75% nickel and can be used directly in the production of steel alloys.

Rehabilitation and improvement of the plant, which began about a year ago, will cost about $10-million.

Mr. Larson revealed that a pilot plant is now being erected at Nicaro. If the experiments at this plant are successful, steps will be taken to revise the production processes for the recovery of an additional 3-million lb. of nickel, as well as the recovery of cobalt, another critically needed metal.

The Cuban Nickel Co., Inc., owner of the plant and its supporting facilities, is owned by the United States Government. Frederick A. Snare Corp., New York, is carrying out the rehabilitation work.

The Nickel Processing Co., a joint enterprise of N. V. Billiton and the National Lead Co., is operating the plant under an agreement with GSA.

Nicaro Nickel Co., a subsidiary of Freeport Sulphur Co., and wartime operator of the plant, owns and operates the pit mines from which the ore is delivered to the waterside plant about ten miles away.

•

Arnall Named to Head OPS

Ellis G. Arnall, former governor of Georgia, was named by President Truman on Feb. 7 to succeed Michael V. DiSalle as head of the Office of Price Stabilization. His appointment will be passed on by the Senate.

Mr. DiSalle will be relieved of his duties as head of OPS on Feb. 15. He will run for the Democratic nomination for senator from Ohio.

Before resigning from his post, Mr. DiSalle named a committee of seven to study the problem of decontrolling prices in industries where such action appears feasible. Edward F. Phelps, assistant to Mr. DiSalle, will head the committee.

•

Reynolds Aluminum Plant

Reynolds Metals Co. announced last week that its proposed $30-million aluminum plant will be constructed at Gum Springs, Ark. The plant will have a capacity of 55,000 tons of aluminum a year and will be in operation early in 1953.

The new plant will employ between 340 and 450 workers. It will be near the company's alumina facilities in Arkansas. J. Louis Reynolds, vice president, said the pot room, in which alumina is converted into pig aluminum, will be a quarter of a mile long. Electric power requirements will be supplied by the Arkansas Power & Light Co. and the Southwestern Power Administration under a contract signed Jan. 29.

•

Indonesia Asks $1.25 for Tin

The Economic Ministry of Indonesia declared last week that it could not agree to a tin price of $1.18 per lb., the settlement basis established recently under the U.S.-British deal for 20,000 tons of Malayan metal. The delegation now in Washington would seek a price of at least $1.25 per lb., according to a spokesman for the Ministry.

Indonesian tin concentrate shipments to the United States had ended with the expiration of a contract in December. Indonesia has been producing at the rate of 30,000 long tons of tin a year, with the government the sole seller.

The United States imported 10,780 tons of tin contained in concentrates from Indonesia in the Jan.-Nov. period of 1951. This compares with 6,925 tons imported during all of 1950.

Miscellaneous Metals

Quotations cover wholesale lots, f.o.b. New York, unless otherwise specified.

ALUMINUM—Per lb., base price, f.o.b. shipping point: 30 lb. ingot, 99% plus, 19c., in pigs, 18c.

Base prices on aluminum ingot of higher purity: 99.75%, 19½c.; 99.8%, 20c.; 99.85%, 21c.; 99.9%, 22c.

ANTIMONY—Per lb., 99½% grade:

	Domestic Boxed (a) New York	Domestic Bulk (b) Laredo
Feb. 7	53.350	50.000
Feb. 8	53.350	50.000
Feb. 9	53.350	50.000
Feb. 11	53.350	50.000
Feb. 12	— Holiday —	
Feb. 13	53.350	50.000

(a) Boxed (224 lb.), 10,000 lb. or more but less than carload. (b) In bulk, carload, f.o.b. Laredo; boxed one-half cent extra.

BISMUTH—Per lb., in ton lots, $2.25.

CADMIUM—Per lb., delivered.

	Commercial Sticks	Special (a) Shapes
Feb. 7	$2.55	$2.80
Feb. 8	2.55	2.80
Feb. 9	2.55	2.80
Feb. 11	2.55	2.80
Feb. 12	— Holiday —	
Feb. 13	2.55	2.80

(a) Special shapes to platers

CALCIUM—Per lb., in ton lots, cast in slabs and small pieces, $2.05.

CHROMIUM—Per lb., 97 percent grade, spot, $1.12; contract $1.07 per lb. (Usually sold as chrome-metal.)

COBALT—Per lb., rondelles or granules, in 500 to 600 lb. containers, $2.40; in 100 lb. containers, $2.42; less than 100 lb. containers, $2.47. Prices f.o.b. N. Y. or Niagara Falls, freight collect.

COLUMBIUM—No quotation. Pricing under prevailing conditions "subject to special terms."

GERMANIUM—Per lb. $180.

INDIUM—Per oz. troy, 99.9 percent pure, $2.25.

LITHIUM—Per lb. 98%, $9.85@$11, depending on quantity.

MAGNESIUM—Per lb., f.o.b. producer's plant, ingots (4x6 in.), 99.8 percent, carload lots, 24½c.; 100 lb. or more, l.c.l., 26½c. Extruded sticks, carload lots, 32½c.; 100 lb. or more, l.c.l. 34½c.

MANGANESE—Per lb. Minimum 96 percent Mn, maximum 2 percent iron, carload lots, bulk, 29c.; packed in cases, 35½c.

Electrolytic manganese 99.9 percent Mn, 28c., carload lots.

MOLYBDENUM—Per lb., 99 percent $3.00.

NICKEL—Per lb., electrolytic cathodes, f.o.b. Port Colborne, Ont., contract price, 56½c. U.S. import duty included. Nickel oxide sinter, 52½c. per lb. of nickel content, f.o.b. Copper Cliff.

OSMIUM — Per oz., $200, nominal.

PALLADIUM — Per oz. troy, $24.

PLATINUM—Per oz. troy, $90 on wholesale lots; $93 on sales to consumers.

QUICKSILVER — Per flask of 76 lb., $201@$204.

RADIUM — Per mg. radium content, $20@$25, as to quantity.

RHODIUM — Per oz. troy, $125.

RUTHENIUM — Per oz. troy, $90@$93.

SELENIUM — Per lb. $3.00@$3.50 for black, powdered, 99.5 percent pure.

SILICON — Per lb., minimum, 97 percent Si, maximum 1 percent Fe, crushed, carload lots, in bulk, 20c.

SODIUM — Per lb., carload lots, in drums, 16½c.; less than carload lots, 17c.

TANTALUM — Per kilo, base price, $160.60 for rod; sheet, $143. Discounts on volume business.

TELLURIUM — Per lb., $1.75.

THALLIUM — Per lb., $12.50.

TITANIUM — Per lb., 96@98%, $5.

TUNGSTEN — Per lb., 98.8 percent minimum 1,000 lb. lots, $6.00 Hydrogen reduced tungsten, 99.9 percent plus $7.75. Ceiling prices effective May 7.

ZIRCONIUM — Per lb., powder, $7 to $8, according to quantity.

Metallic Ores

Prices in tons of 2,000 lbs., or "units" of 20 lb., unless otherwise stated.

ANTIMONY ORE—Per unit of antimony contained, 50 to 55 percent, $5.00@$5.25; 58 to 60 percent $5.25@$5.50; 60 to 65 percent, $6.50@$6.75.

BERYLLIUM ORE — Per unit of BeO contained 10 to 12% f.o.b. mine, Colorado, nominal. North Carolina, $34@$37.

Imported ore, basis 10% BeO, $36.50 per unit, c.i.f. U.S. ports.

CHROME ORE—Per long ton, dry basis, subject to penalties if guarantees are not met, f.o.b. cars New York, Philadelphia, Baltimore, etc.

Indian and Rhodesian:
48% Cr_2O_3, 3 to 1 ratio lump ..... $43.00@$45.00
48% Cr_2O_3, 2.8 to 1 ratio ..... $40.00@$42.00
48% Cr_2O_3, no ratio ..... $31.00@$32.00
South African (Transvaal):
48% Cr_2O_3, no ratio ..... $34.00@$35.00
44% Cr_2O_3, no ratio ..... $27.00@$28.00
Turkish:
48% Cr_2O_3, 3 to 1 ratio, lump ..... $54@$56
Brazilian:
44% Cr_2O_3, 2.5 to 1 ratio, lump ... (a) $32.00

(a) Nominal.

COBALT ORE — Per lb. of cobalt contained, $1.35@$1.45, f.o.b. Cobalt, Ont., depending on grade.

MANGANESE ORE — The views of sellers on nearby ore remain firm. However, some uncertainty prevails in reference to forward business. Indian ore was unchanged at $1.20 to $1.25 per long ton unit of Mn, c.i.f. U.S. ports, duty extra, basis 46 to 48% Mn, nearby positions.

On long-term contracts for ore from various sources the quotations are nominal at 90 to 95c., c.i.f. duty extra.

MOLYBDENUM ORE — Per lb. of contained MoS_2, 90% concentrate, 60c., f.o.b. mines.

TANTALUM ORE — Per lb. Ta_2O_5, $2.00@$2.25 for 56@60% concentrate.

TITANIUM ORE — Per gross ton, ilmenite, 56 to 59 percent TiO_2, f.o.b. Atlantic seaboard, $16@$18, nominal.

Rutile, per lb., minimum 94% concentrate, 4@5c., nominal.

TUNGSTEN ORE — Per short ton unit of WO_3, domestic concentrates of known good analysis, basis 60%: Ceiling price established at $65, effective April 6.

Western high grade scheelite concentrate, $65, per unit, f.o.b. mine.

North Carolina high grade concentrate, $65 per unit, f.o.b. mine.

London quotes 485s. per long ton unit or WO_3, c.i.f. U.K. ports.

VANADIUM ORE — Per lb. V_2O_5 contained, domestic, 31c., f.o.b. mine.

ZIRCON ORE (sand) — Per long ton, c.i.f. Atlantic seaboard, minimum 65 percent ZrO_2, $47@$50.

Alloys

BERYLLIUM-COPPER — Master alloy, 4 percent beryllium, remainder copper, 5 lb. ingot, $1.56 per pound of alloy; 3 oz. ingot, $2.09.

FERROCHROMIUM — Per lb. of Cr: High carbon (4 to 9%C) 65 to 69% Cr, lump, carloads, delivered Eastern zone, 21¾c.; low carbon, 30½c.

FERROCOLUMBIUM — Per lb. of Cb contained, 50@55 percent, $4.90.

FERROMANGANESE — Per gross ton, 78@82 percent, $185, seaboard.

FERROMOLYBDENUM, Etc.—Per lb. of Mo contained, f.o.b., shipping point: Ferromolybdenum, 55@65 percent Mo $1.32; calcium molybdate ($CaO\ MoO_3$), $1.15; molybdic trioxide (MoO_3), bagged, $1.13, canned, $1.14.

FERROPHOSPHORUS — Per gross ton, 18 percent P, $58.50; electrolytic, 24 percent, $75, f.o.b. Alabama and Tennessee.

FERROSILICON — Per lb. of contained Si, Eastern zone: 50% grade, 12.40c.; 75% grade, 15.60c.

FERROTITANIUM — Per lb. of Ti contained, 20 to 25% max. 0.10% carbon, $1.40.

FERROTUNGSTEN — Per lb. of W contained, $75@80 percent W, $5.00.

FERROVANADIUM — Per lb. of V contained: Open hearth, $3.00; crucible, $3.10; low-carbon and silicon, $3.20. Contract prices.

SILICOMANGANESE — Per lb. carload lots, f.o.b. shipping point, freight allowed, maximum 1½% carbon, 9.9c.

SPIEGELEISEN—Per gross ton, 19 to 21 percent grade, $75, Palmerton, Pa.

ZIRCONIUM ALLOY — 12 to 15 percent Zr, 39 to 43 percent Si, 7c per lb., bulk, carload lots; 35 to 40 percent Zr, 47 to 52 percent Si 20.25c. per lb.

Kennecott Copper Corporation
Kennecott Sales Corporation

Producers and Sellers of

Electrolytic Copper
Chino Fire Refined Copper (K.C.M.)
Braden Fire Refined Copper (★★★)
Molybdenite

Offices

161 East 42nd St., New York 17, N. Y.

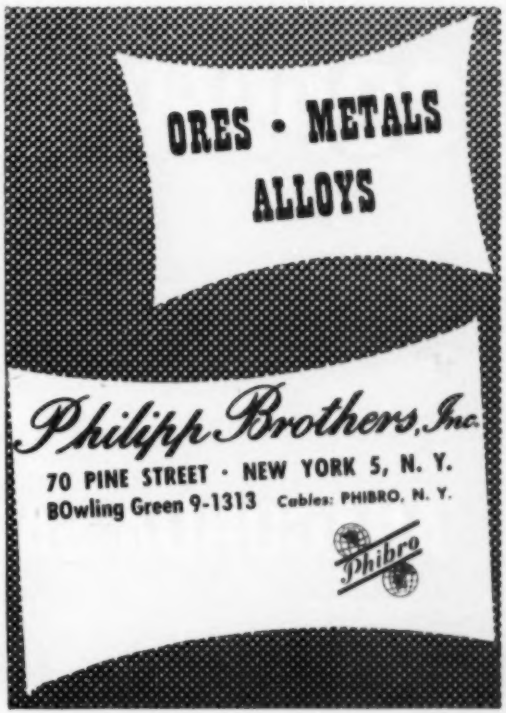
E. A. GODOY & CO., INC.
CUNARD BUILDING, 25 BROADWAY
NEW YORK 4, N. Y.

CHROME ORES
MANGANESE ORES
IRON ORES

C. G. TRADING CORP.
122 EAST 42nd STREET
NEW YORK 17, N. Y.
Le 2-9045

MANGANESE **CHROME**
FLUORSPAR **KYANITE**
MICA **ILMENITE**

United States and Canadian Agents for
B. N. Elias & Co. Ltd.



THE AMERICAN METAL COMPANY, LTD.

61 BROADWAY, NEW YORK 6, N. Y.

Producers and Sellers of

COPPER • ZINC • LEAD

SILVER • ANTIMONIAL LEAD • ALUMINUM ALLOY INGOT
SOLDER • METAL POWDERS • COPPER SHOT
SELENIUM • TELLURIUM • ZINC DIE CAST ALLOY

Importers and Sellers of
PIG TIN

Buyers, Smelters and Refiners of

Gold, Silver, Copper, Zinc and Lead Ores, Sweeps, Mattes and Bullion, Copper and Brass Scrap, Copper Bearing Material, Zinc Drosses and Skimmings, Lead Scrap and Residues, Battery Plates, Lead Covered Cable, Tin Bearing Material, Automobile Radiators and Aluminum Scrap.

COPPER ZINC LEAD

ELECTROLYTIC "HEC" "CCC" FIRE REFINED "CFR"

99.99+% "ELECTRIC" "HIGH GRADE" ELECTROLYTIC

DESILVERIZED "ILR"

NODULIZED MANGANESE ORE • FERROMANGANESE STANDARD GRADE

CADMIUM • SILVER • BISMUTH • INDIUM

Arsenic • Palladium • Platinum • Selenium • Tellurium • Vanadium

ANACONDA
from mine to consumer

ANACONDA SALES COMPANY

25 Broadway, New York 4, N. Y. • Subsidiary of Anaconda Copper Mining Company

ON THE SURFACE, the prospect of ending price controls over minerals might seem good. World prices of lead, zinc and other key minerals have been weakening. And the mobilizers decided to stretch out military output over a longer period of time than they had been planning on.

ACTUALLY, mobilizers are preparing an all-out fight to keep price controls on minerals and everything else. Their big job – as they see it – is to convince Congress that the stretch-out of military production didn't end the need for ceilings.

THE NEW ARMS PLAN does mean that consumption of raw materials is now at a peak and won't go any higher. Demand for raw materials for arms is felt about a year before the products are paid for by the military. A year from now, the military expects to be paying out around $4-billion per month for arms and defense construction.

DELIVERIES of finished military goods are now being made at about $2-billion per month. But raw materials are now going into the industrial pipe lines to produce military goods at the $4-billion rate. So the impact of mobilization on supplies of steel, copper, aluminum, nickel, lead, zinc and other key materials is as great as it ever will be, unless the program is changed again.

THE GENERAL IMPRESSION is that the new program means more materials for civilian goods. But there's a catch. Originally the military planned on a 95-group air force and 20 army and marine divisions. Under the new program, they will get 143 wings and 24 divisions. It is an overall increase, spread out over a longer period of time than anything the mobilizers had been talking about publicly. The rate of $4-billion per month in arms deliveries would have lasted six months under the old program. Under the new one, it will last 18 months or longer.

ALL THIS ADDS UP, in the minds of mobilizers, to a need for continued controls. Mining industry efforts to have controls taken off lead and zinc, for example, have kicked up strong reaction among mobilizers. Officials agree that world prices are easing down toward U. S. ceilings. But they will insist on full control authority from Congress in the New Defense Production Act.

THEY ARE AFRAID that easing World prices will be temporary. They point out that despite the stretch-out, the new arms program will in the long run chew up more metal than the old one. The impact of expanding British and Western European Arms output has them worried.

CONGRESS, in its present mood, will probably give the mobilizers what they want. It might put into the law some gimmick for decontrol at the discretion of the President. But so far it hasn't shown any desire to order decontrol itself. Lawmakers are afraid of another outbreak of inflation and what it would do to them at the polls in November.

ECONOMIC STABILIZER ROGER PUTNAM, who sits over OPS, has made his stand clear. He, too, thinks the current softening of prices is temporary. He even foresees the possibility of a new round of consumer scare-buying later in the year. Chief Mobilizer Wilson is also convinced he needs a continuation of price ceilings.

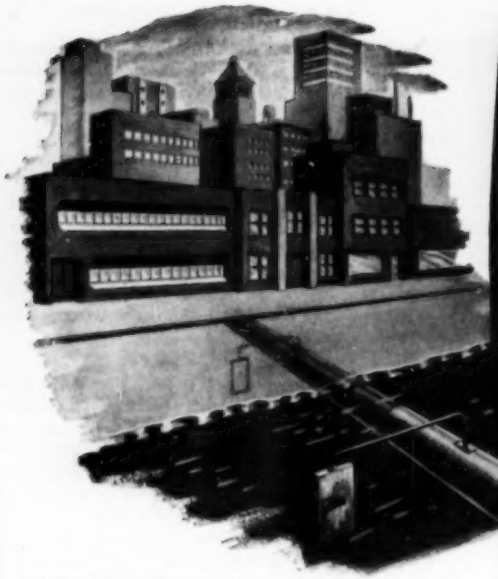
SUSPENSON OF IMPORT DUTIES on lead and zinc was a case of Congress giving mobilizers what they wanted. The bills were signed by President Truman Feb. 11. They call for suspension of the duty until March 31, 1953, or until the National emergency is declared ended, whichever comes first.

THE DUTIES ARE TO GO BACK into effect if the price of either metal falls to 18c. per lb. average, for a calendar month. The bills specify that prices as quoted in *Engineering and Mining Journal's Metal and Mineral Markets* are to be the official standard. An Act of Congress would not be necessary to put the duty back into effect. The bill required the Tariff Commission to notify the President of the price drop, and required the President to issue a proclamation ending the duty suspension.

SEN. G. W. MALONE (Rep., Nevada), made a vain effort to have the Senate change the 18c. level at which the duties would be reimposed. He held the floor several hours, while arguing that inflation, or the manipulation of foreign currencies, might push prices higher than stabilization officials now expect. Instead of the flat 18-cent level, he wanted the Tariff Commission empowered to fix a price based on "Fair and reasonable competition between domestic and foreign producers." Such a price, he argued, might well turn out to be higher than 18c. The Senate brushed aside his proposal with voice votes.

DEFENSE PRODUCTION ADMINISTRATION has decided U. S. zinc needs for 1955 will be almost met by existing expansion projects. But lead expansion is still 75,000 tons short of estimated needs. DPA's 1955 target for zinc is a supply of 1,320,000 short tons. It figures that 190,000 tons of this must come from new facilities. So far, DPA has approved new projects which would supply 178,000 tons, leaving an additional 12,000 tons to be approved.

DPA'S 1955 GOAL FOR LEAD is 1,342,000 short tons. It had a tough time coming up with this figure. One day it issued a report saying the estimate 1955 demand would be 1,423,000 tons. The next day it issued a "correction," giving the lower figure. Both figures are well over what DPA sees as the 1955 supply. It thinks in that year, U. S. mine production will be 417,000 tons, scrap will yield 430,000 tons and imports 420,000 tons. This is 75,000 tons less than estimated demand. The industry view, as long as views of 1955 are in vogue, is that lead supplies in 1955 could total 1,425,000 tons. Requirements are more likely to hit 1,300,000 tons, leaving a surplus of 125,000 tons.



in fighting corrosion with corrosion—

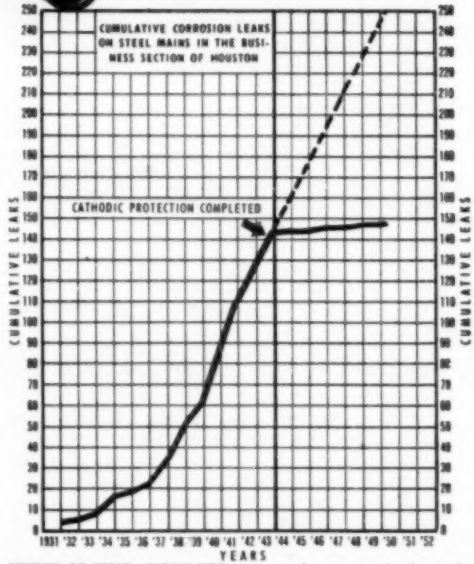
ZINC

is Industry's most effective "expendable" weapon!

NEARLY 50% of all the zinc consumed annually in the United States — around 400,000 tons — is used in galvanizing, *i.e.*, protective zinc coating on iron or steel. This is ample evidence of the firmly established position of the metal as industry's most effective and economical "sacrificial" weapon in its unceasing combat with rust. The electrochemical reaction between iron and zinc, which has resulted in the dominance of zinc in this field, is precisely the same as that which takes place in the relatively new and growing use of the metal for cathodic protection of pipe lines and other underground iron and steel structures. The sole difference between the two methods being that in cathodic protection the zinc, in the form of anodes, is buried adjacent to a pipe line and connected by a conductor, while in galvanizing the zinc is bonded to iron or steel. In either form, zinc "protects" — as has been attested to by those progressive companies who have used zinc anodes for this purpose. For example, in the Northwest, a utility company reports:

> *"The most interesting installation was made in 1942 on four inch bare pipe located in the seepage from an irrigation ditch that circled the brow of a hill in such a manner that the pipeline trench intersecting the irrigation ditch was kept moist throughout the season. Approximately seven hundred feet of this four inch line had been replaced twice. In the spring of 1942 leakage developed and when the pipe was uncovered it was found to be in bad condition. Pending replacement, repairs were made and seventeen zinc anodes were installed with series-parallel connections. In the press of other work, this replacement job was put aside and in 1943 it was found that no further leaks had developed. In 1948 the replacement had still not been made and we were getting a good potential-to-ground and plenty of protective current. The last test made in the spring of 1950 shows a slight increase in the potential-to-ground and the pipe has not been replaced nor have we felt it even necessary to uncover it for visual inspection."*

The graph at right provides additional evidence from the State of Texas. Here are two examples, under widely dissimilar conditions, where zinc has proved itself as a highly efficient cathodic protector for underground pipe lines. This is not surprising in view of the long-recognized superiority of the metal in the field of galvanizing.


CUMULATIVE CORROSION LEAKS ON STEEL MAINS IN THE BUSINESS SECTION OF HOUSTON
CATHODIC PROTECTION COMPLETED
CUMULATIVE LEAKS
CUMULATIVE LEAKS
YEARS
1931 '32 '33 '34 '35 '36 '37 '38 '39 '40 '41 '42 '43 '44 '45 '46 '47 '48 '49 '50 '51 '52

EFFECT OF ZINC ANODE PROTECTION ON OLD LINES. *Most of the United Gas Corp.'s welded-steel-gas distribution mains, coated with hot asphalt and asbestos wrapper, were installed before 1930. Cathodic protection of mains with zinc anodes was completed in early 1944. Curve shows cumulative leak record of these mains. Only 5 corrosion leaks occurred in the 6 years since cathodic protection was applied, comparing with 142 during 1932-1944.*

ST. JOSEPH LEAD COMPANY 250 PARK AVE., N.Y. 17

for Galvanic & Cathodic Protection Zinc is Standard

Zn

ST. JOE Electro-Thermic ZINC: High grade, Intermediate, Brass special, Prime western

BUNKER HILL 99.99+ % ZINC

Rolled Metals, Etc.

BRASS—Cents per lb. (base prices)

	Sheet	Wire	Rods
Yellow Brass	38.28	38.57	a 32.63
Best quality brass ..	39.15	39.44	38.84
Red brass 80%	39.67	39.44	38.84
Red brass 85%	40.14	39.88	39.28
Com'l bronze	41.13	40.84	40.24
Gilding metal	41.63	41.28	40.68

(a) Free cutting

CADMIUM – Per lb. Special shapes, to platers, $2.80.

COPPER – Per lb. Sheets, over 20 in. wide, 41.63c., rolls 20 in. and under, 39.71c.; Wire, bare, carload lots, f.o.b. mills 28.67@30.42c.

LEAD SHEETS – Per lb., full rolled, 140 sq. ft. 24c.

MONEL METAL – Per lb. (base prices) Standard cold-rolled sheet, 60½c.; cold-rolled strip, 63½c. Rods, hot-rolled 58½c.

NICKEL – Per lb. (base prices sheets, cold-rolled, 77c.; rods, hot-rolled, 73c.

NICKEL SILVER – Per lb., sheets, 10 percent, 49.27c.; 18 percent, 51.91c.; wire and rods, 10 percent, 51.49c.; 15 percent 54.79c.; 18 percent 57.91c.

PHOSPHOR BRONZE – Per lb., sheets, 5 percent tin, 60.20c.; wire and rods, 5 percent 60.45c.; 10 percent 67.33c.

ZINC – Per lb., carload lots, f.o.b. mill (base price): Sheet 26½c.; ribbon 25c.; plates 25½@26½., depending on size.

ZINC DIE-CASTING ALLOY – Per lb., carload lots, delivered, 23.65c. to 24.15c., is No. 3 "Zamac" grade.

Metallic Compounds

ARSENIOUS OXIDE (arsenic trioxide), refined, white, minimum 99 percent – Per lb., 6½c., in barrels carload lots delivered.

COBALT OXIDE – Ceramic grade 72½ to 73½% Co, $1.82 per lb. east of Mississippi, and $1.84½ per lb. west of Mississippi. Quotations are for oxide packed in 350-lb. containers.

COPPER SULPHATE – Per lb., in carload lots, 8.95@9.95c., large or small crystals, f.o.b. N.Y.

•

Quotations on nonmetallic minerals appeared in Jan. 3 issue.

•

Federal Reserve's Index

The Federal Reserve Board's index of industrial production for December, was 218% of the 1935-39 average, unchanged since last August.

•

Lead Average (Monterrey)

The net price realized by the American Smelting & Refining Co. on all of its sales of Mexican pig lead, including metal sold for consumption in Mexico, during the week ended Feb. 2, 1952, was 18.62c. (US) per pound, f.o.b. refinery, Monterrey, Mex.

DAILY PRICES OF METALS (E & M J QUOTATIONS)

Feb.	Electrolytic Copper: Domestic Refinery	Electrolytic Copper: Export Refinery	Straits Tin, New York	Lead: New York	Lead: St. Louis	Zinc East St. Louis
7	24.200	27.425	121.500	19.000	18.800	19.500
8	24.200	27.425	121.500	19.000	18.800	19.500
9	No market	27.425	121.500	19.000	18.800	19.500
11	24.200	27.425	121.500	19.000	18.800	19.500
12	Holiday	27.425	Holiday	Holiday	Holiday	Holiday
13	24.200	27.425	121.500	19.000	18.800	19.500
Average	24.200	27.425	121.500	19.000	18.800	19.500

Average prices for calendar week ended Feb. 9 are: Domestic copper f.o.b. refinery, 24.200 c.; export copper f.o.b. refinery 27.425c.; Straits tin, 121.500c.; New York lead, 19.000c.; St. Louis lead, 18.800c.; St. Louis zinc, 19.500c.; and silver, 88.000c.

The above quotations are our appraisal of the major United States markets, based on sales reported by producers and their agencies. They represent payments received by producers for the product. They are reduced to the basis of cash, New York or St. Louis, as noted. All prices are in cents per pound.

Copper, lead and zinc quotations are based on sales for both prompt and future deliveries; tin quotations are for prompt delivery only.

In the trade, domestic copper prices are quoted on a delivered basis; that is, delivered at consumers' plants. As delivery charges vary with the destination, the figures shown above are net prices at refineries on the Atlantic seaboard. Delivered prices in New England average 0.300c. per pound above refinery basis.

Our export quotation for copper reflects prices obtaining in the open market and is based on sales in the foreign market reduced to the f.o.b. refinery equivalent, Atlantic seaboard. On f.a.s. transactions we deduct 0.075c. for lighterage, etc., to arrive at the f.o.b. refinery quotation.

Quotations for copper are for ordinary forms of wirebars and ingot bars. Revised premiums on special shapes, effective in most instances on deliveries beginning Jan. 1, 1951, are: Standard ingots 0.125c. per pound; slabs, 0.375c. and up; cakes 0.425c. and up, depending on weight and dimensions; billets 1.35c. and up, depending on dimensions and quality. Discount on cathodes 0.125c. to 0.15c. per pound.

Quotations for zinc are for ordinary Prime Western brands. Premiums obtaining over Prime Western zinc in the East St. Louis market on the following grades, in cents per pound: Selected 0.10c.; Brass Special, 0.25c.; Intermediate, 0.5c. High Grade zinc sold on contract, delivered in the East and Middle West, commands a premium of 1.35c. per pound over the East St. Louis basis for Prime Western: on Special High Grade the premium or differential is 1.50c. per pound, effective Jan. 1, 1951.

Quotations for lead are for the common grade, and are based on sales of domestically refined metal sold to domestic consumers. The differential on sales in the Chicago district is 10 points under New York; for New England add 7½ points to the New York basis. Corroding grade commands a premium over common lead of 10 points.

Silver, Gold, and Sterling Exchange

The daily New York silver quotation reported by Handy & Harman is for silver contained in ores and other unrefined silver-bearing materials, in cents and fractions of a cent per troy ounce. It is determined by Handy & Harman on the basis of actual sales of bar silver .999 fine in amounts of 50,000 ounces or more for nearby delivery at New York as reported daily by regular suppliers, and is usually one-quarter cent below the price paid for such bar silver, this reduction being allowance to such suppliers for carrying, delivering, and marketing. In addition to foreign silver, the quotation also applies to domestic silver if such silver enters the New York market.

The Treasury's purchase price of newly mined domestic silver was established at 90.5c. per troy ounce, 1000 fine, effective on July 1, 1946 under an amendment to the Silver Purchase Act of July 6, 1939.

Feb.	Sterling Exchange "Checks"	Silver New York	Silver London	Gold London
7	$2.78	88.000	77d	248s
8	2.78	88.000	77d	248s
9		Not Quoted		
11	2.78	88.000	77d	248s
12	Holiday	Holiday	77d	248s
13	2.78	88.000	77d	248s

Average silver, 88.000c.; Sterling Exchange 278.000c.

London silver quotations are in pence per troy ounce, basis .999 fine.

London gold quotations are per troy ounce, basis 1000 fine.

Sterling quotations represent the demand market in the forenoon.

United States Gold Price

The price paid by the United States Treasury for gold purchased by the mints continued at $35 per troy ounce of fine gold, less ¼ of 1 percent.

Actual payment by the United States Treasury for gold in imported and domestic ore or concentrate is at 99.75 percent of the price quoted by the Treasury, which at present is equal to $34.9125 per ounce.

London Standard Tin

Standard tin on the London Metal Exchange, first session, per long ton:

	Standard Tin Spot	Standard Tin 3-Mo.
Feb. 7	£996	£995
Feb. 8	£992½	£992½
Feb. 11	£993	£982½
Feb. 12	£981	£981
Feb. 13	£982½	£983

Tin 99%

Quotations on 99% tin (tin content), New York, were nominally as follows:

Feb. 7th, $1.20½; 8th, $1.20½; 9th, $1.20½; 11th, $1.20½; 12th, Holiday; 13th, $1.20½.

Foreign Exchange

Foreign exchange rates on the Mexican peso and the Canadian dollar:

Mexico (silver peso) ..... 11.58c.
Canada (dollar) (a) ..... 99 31/32c.

(a) Selling basis, N.Y.

Official London Prices

The following delivered quotations have been fixed by the British Ministry of Metals for the United Kingdom:

	Per Long Ton £	s.	d.
Copper:			
Electrolytic, high conductivity	227	0	0
Fire refined, high conductivity	227	0	0
Fire refined, high grade	226	10	0
Fire refined, min. 99.7 percent	226	0	0
Fire refined, min. 99.2 percent	225	10	0
Lead:			
Soft, foreign duty paid	170	0	0
Soft, Empire	170	0	0
English, refined	171	10	0
Zinc:			
Foreign (G.o.b.) duty paid	190	0	0
Domestic (G.o.b.)	190	0	0
Prime Western and debased	190	0	0
Refined and electrolytic	194	0	0
Minimum 99.99 percent	196	0	0

INTERNATIONAL MINERALS AND METALS CORP.,
11 Broadway, N. Y. 4, N. Y. Cable: METMINCO,N.Y.
Phone: Digby 4-2861

Buyers of:

- ALL GRADES OF COPPER-BEARING MATERIALS
- LIGHT AND HEAVY BRASS
- LIGHT COPPER
- HEAVY COPPER, WIRE and CABLE
- AUTO RADIATORS
- COPPER ORE
- MATTE AND BULLION

For Direct Shipment to the Phelps Dodge Plants at LAUREL HILL, L. I., N. Y.
Douglas, Arizona - El Paso, Texas

We Are Always in the Market!

Also Buyers of:

- Zinc Ores, Concentrates and Dross

For Direct Delivery to National Zinc Co., Inc.
Bartlesville, Okla.

Sellers of:

- COPPER
- SPELTER
- CADMIUM
- QUICK-SILVER
- ZINC DUST
- SULPHURIC ACID

ELECTROLYTIC COPPER

Metal Department

BACHE & CO.

36 WALL STREET, NEW YORK 5, N. Y.

Telephone DIgby 4-3600

TUNGSTEN
TIN
ANTIMONY

BUYERS

Tungsten Concentrates, Tungsten Tin Concentrates • Mixed Tungsten Ores • Tungsten Tailings, Scrap, Tips, Grindings • Tin Concentrates — Tin Dross, Tin Furnace Bottoms.

SELLERS

Tungsten Concentrates to Buyers' Specifications • Tungsten Salts, Tungsten Powder • Tungsten Rods and Wires • Tin Ingots, Tin Oxides, Tin Chlorides.

WAH CHANG CORPORATION
(FORMERLY WAH CHANG TRADING CORPORATION)

233 BROADWAY
NEW YORK 7, N. Y.
Plant: Glen Cove, N. Y.
Cable Address:
WAHCHANG NEW YORK

We Buy Crude Platinum

WE ARE always in the market for native crude platinum, platinum and gold concentrates, gold dust and scrap precious metal. We pay for all the platinum metals and gold contained in such material.

BAKER & CO., INC.
113 Astor Street, Newark 5, N. J.

Irvington Smelting & Refining Works

Buyers, Smelters and Refiners of
Gold, Silver, Lead, Copper and Platinum
Ores, Sweeps and Bullion

Manufacturers of Copper Sulphate

Irvington, New Jersey

Lehigh Valley R.R. connection

Cables
AYRTON - NEW YORK

Telephone
CIRCLE 6-7647

AYRTON METAL COMPANY

30 ROCKEFELLER PLAZA INC NEW YORK

Members of Commodity Exchange, Inc. American Tin Trade Association, Inc.

IMPORTERS OF
WOLFRAM — MANGANESE — CHROME — ANTIMONY ORES
DEALERS IN
PLATINUM — GOLD — SILVER
Buyers of crude platinum

U. S. Agents for AYRTON METALS LTD., 10—13 Dominion St., London, EC2

Use of Lead in November Showed Little Change

Consumption of lead (primary and secondary) in November totaled 87,532 tons, which compares with 87,953 tons in October. With fewer working days in November, the daily average was higher than in the preceding month, amounting to 2,918 tons, against 2,837 tons in October. Consumption of lead in the Jan.-Nov. period totaled 1,092,174 tons, or only 15,000 tons lower than in the corresponding period of 1950.

Consumers' stocks of lead decreased for the fourth consecutive month to 89,277 tons on hand as November ended. This compares with 92,707 tons on hand a month previous. In a normal economy, consumers' stocks would be viewed as dangerously low.

Use of lead in November and the eleven months ended November, according to the Bureau of Mines, in tons:

	Nov. 1951	Jan.-Nov. 1951
Metal Products:		
Ammunition	2,802	37,833
Bearing metals	3,483	32,244
Brass and bronze	1,814	27,678
Cable covering	11,854	121,425
Calking lead	2,858	42,806
Casting metals	1,175	20,551
Collapsible tubes	892	12,432
Foil	109	2,792
Pipe, traps and bends	2,572	30,193
Sheet lead	2,211	28,719
Solder	5,547	75,486
Storage batteries (antimonial)	15,117	184,280
Storage batteries (oxides)	12,569	161,024
Terne metal	189	1,942
Type metal	2,425	25,574
Total	65,617	804,978
Pigments:		
White lead	1,304	24,485
Red lead and litharge	5,817	81,731
Pigment colors	1,094	11,807
Other(a)	804	14,299
Total	9,019	132,322
Chemicals:		
Tetraethyl lead	9,966	118,579
Miscellaneous chemicals	525	6,208
Total	10,491	124,787
Miscellaneous Uses:		
Annealing	523	6,102
Galvanizing	131	1,947
Lead plating	54	1,116
Weights and ballast	574	6,676
Total	1,282	15,841
Other Uses Unclassified	1,123	14,246
Total consumed	87,532	1,092,174

(a) Includes lead in leaded zinc oxide.

Zinc Institute to Meet

The 34th annual meeting of the American Zinc Institute will be held at the Hotel Statler, St. Louis, Mo., on April 21 and 22.

Qualified speakers from Washington and from the industry will report on the general outlook for metals and the zinc supply and requirements picture. Mine development and production expansion at home and abroad will be thoroughly covered by a special panel of mining men. Plans are under way to add several special features to the program relating to topics of vital interest to all concerned.

•

Copper Sulphate in 1951

Production of copper sulphate in the United States in 1951 totaled 106,936 tons (copper content 26,734 tons), according to a preliminary estimate of the Bureau of Mines. This compares with 1950 production of 87,300 tons (copper content 21,816 tons).

Shipments in 1951 totaled 104,235 tons, gross weight, against 91,296 tons in 1950 and 84,396 tons in 1949.

Stocks of copper sulphate in the hands of producers at the end of 1951 totaled 4,860 tons, which compares with 2,200 tons a year ago and 6,400 tons two years ago.

Exports of copper sulphate in the 11 months ended November totaled 39,354 tons. This compares with 30,144 tons exported during all of 1950.

•

Anaconda Gets Canadian Gas

Natural gas from Alberta, Canada, is being piped to Anaconda's plants in Great Falls, Anaconda, and Butte, Mont. The pipe line, opened Feb. 7, crosses the border near Aden, Alta. The gas is being piped from the Pakowki field, southwest of Lethbridge.

•

Tri-State Concentrates

Joplin, Mo., Feb. 9, 1952

Blende

	Per Ton
Prime coarse (jig and table 60% zinc)	$135.00
Flotation, 60% zinc	$135.00

Galena

Coarse and flotation, 80% lead	$245.95

Smelters' Copper Scrap Prices

Custom smelters' buying prices for scrap, carload lots, refinery:

No. 1 heavy copper and wire, 19½c.; No. 2 heavy copper and wire, 17¾c.; Light copper, 16½c.; refinery brass, 17½c.

•

Brass and Bronze Ingot

85-5-5-5 (No. 115) 27½c.; 80-10-10 (No. 305) 33c.; 88-10-2 (No. 215) 40c. Yellow, 23½c. and upward.

•

Dealers' Scrap Prices

Dealers' buying prices, f.o.b. New York or equivalent freight points, for wholesale quantities, in cents per lb.

No. 1 copper wire	18½@19½
Heavy copper & wire, mixed	17½@17¾
Light copper	16@16½
No. 1 composition	18½@18½
Composition turnings	17½@17¾
Cocks and faucets	16½@16½
Light brass	9½@10
Yellow brass turnings, mix.	13½@14
Heavy yellow brass, mixed	13½@14½
Auto radiators, unsweated	14½@15
Brass pipe, cut	16@16½
Rod brass turnings, No. 1	15@15½
Rod ends, brass	15½@16
New soft brass clips	17½@18
Cast aluminum, mixed	7½@8
Aluminum pistons, clean	7½@8
Aluminum crankcases	7¾@8
Aluminum clips, new soft	10½
Sheet aluminum, old clean	8
Duralumin clips, new	8
Aluminum turnings, clean	5
Zinc die cast, mixed	6½@7
Zinc die cast, new	8½@9½
Old zinc	10@10½
New zinc clips	13½@13½
Soft or hard lead	15½@16
Battery plates	9½@10½
Babbitt mixed	17@17½
Linotype or stereotype	17½@18
Electrotype	16@16½
Solder joints close cut	20@22
Block tin pipe	1.05@1.10
No. 1 pewter	75@80
Autobearing babbitt	60@62
Monel clips, new	28@30
Monel sheet, clean	28@30
Monel turnings	25@27
Nickel clips, new	35@38
Nickel anodes, cast	35@38

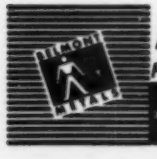
PRICES - TRENDS - DEVELOPMENTS

You'll find them all in "Metal & Mineral Markets"

Send in your subscriptions today!

TO E&MJ METAL AND MINERAL MARKETS

Mail Circ. Dept., 330 WEST 42nd ST., NEW YORK 18, N. Y.



ALL METALS
ALL ALLOYS • ALL FORMS

Putting Mettle into Metals Since 1896

Belmont SMELTING & REFINING WORKS, INC.
327 BELMONT AVENUE • BROOKLYN 7, N. Y.
Telephone DIckens 2-4900

ILMENITE

10,000 TONS AVAILABLE NOW

TiO_2	59.60%	Fe_2O_3	27.00%
FeO	11.52%	Al_2O_3	0.44%
SiO_2	0.50%	CaO	0.05%
MgO	0.17%	MnO	0.31%

C. Matteotti 9 **SILTA S.A.**

Cable Add. "SILTAM" Milano, Italy

UNITED STATES SMELTING REFINING AND MINING COMPANY

75 FEDERAL STREET, BOSTON, MASS.

Producers of **GOLD, SILVER, LEAD, ZINC, CADMIUM, ANTIMONIAL LEAD, ARSENIC AND TELLURIUM**

METAL SALES OFFICE · 57 WILLIAM STREET, NEW YORK, N. Y.

OPERATING OFFICES: Newhouse Building, Salt Lake City, Utah; Fairbanks, Alaska; Nome, Alaska.

EXPLORATION OFFICES: For examination and purchase of mining properties: 75 Federal Street, Boston, Mass.; 57 William Street, New York, N. Y.; Newhouse Building, Salt Lake City, Utah; Fairbanks, Alaska; Nome, Alaska.

PHELPS DODGE CORPORATION
PHELPS DODGE REFINING CORP.

L N S ELECTROLYTIC COPPER OF HIGH CONDUCTIVITY AND COPPER CONTENT **P★D**

P D M— FIRE REFINED COPPER

TRIANGLE BRAND COPPER SULPHATE

BUYERS OF

BULLION, ORES CONCENTRATES, MATTE, BLISTER

230 Michigan Ave.
Chicago, Ill.

Refineries:
Laurel Hill, N. Y.
El Paso, Texas

40 Wall Street
New York